

Science Performance Event

Middle School Level

by

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Waynesville RVI School District

Southwest Regional MAP Center

# Weather Forecasting

**Purpose:** This performance event is intended to be used as a culminating activity or assessment following a series of lessons about weather conditions that affect weather. The students will be required to forecast the weather based on recent weather information.

**Level:** Middle School

**Subject:** Science

## **Show-Me Standards Addressed:**

Content Standards: Sc5

Process Standards: 3.5, 1.2

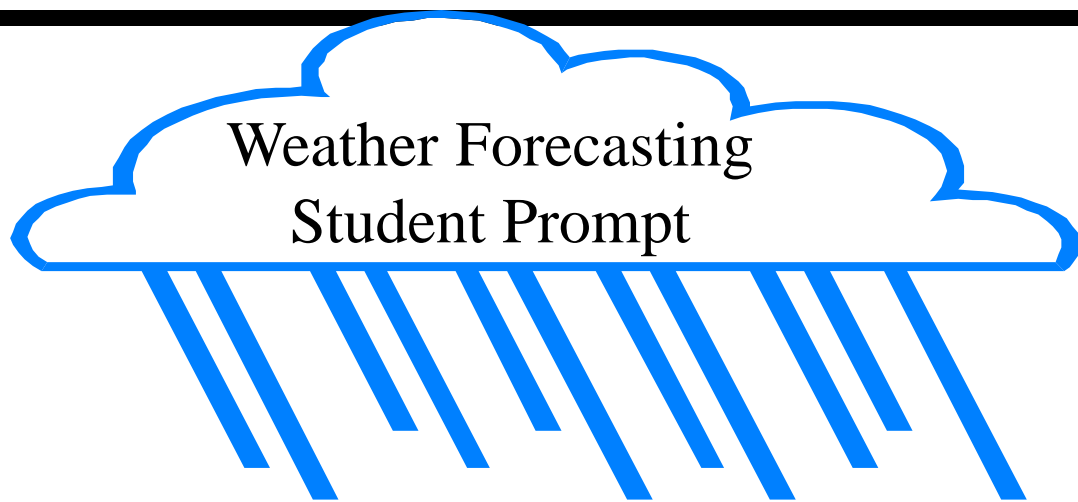
**Materials Needed:** pencil, Performance Event Packet (which contains the Student Prompt, Recent Weather Conditions Chart, the Response Sheet, and the Scoring Guide).

**Time Needed for Event:** 30 minutes

**Instructions for Administration:** Present students with the Performance Event Packet and make sure they clearly understand what is expected. Go over the scoring guide to ensure that students know what is meant by quality. Tell the students they will use the Recent Weather Conditions Chart as a basis for making their weather forecast.

NOTE: If the teacher wanted to expand the activity, he/she could ask that students use the newspaper for a three day period to complete the chart. Then make a prediction about the fourth day.

**Pre-Assessment Instructions:** Prior to the administration of this performance event, students will need to have the prerequisite knowledge of reading charts, making predictions, and understanding the factors that help determine weather (temperature, relative humidity, barometric pressure, sky cover, wind direction, wind speed, and precipitation).



Your school is taking a field trip Friday, which is tomorrow. Your class will be walking a short distance to the Community Activities Center. Your teacher told the class to wear casual clothes but you are still unsure about what to wear on the field trip. You can't decide whether to wear shorts or long pants; whether to wear a heavy wool coat, raincoat, or a lightweight windbreaker jacket; whether to wear a baseball hat, stocking cap, or go bare-headed.

You have decided to base your decision about what to wear on tomorrow's weather forecast. To predict tomorrow's weather, use what you know about the recent weather conditions. Get your information from the Recent Weather Conditions Chart, which describes the weather conditions for the past three days. You will need to make a forecast to fill in the information for Friday on the chart.

Forecast tomorrow's weather to decide what to wear. Then, write an explanation that tells what you have decided to wear and the reasons, relating to weather, for your choice. Be sure to include the following weather conditions in your explanation: temperature, relative humidity, barometric pressure, sky cover, wind direction, wind speed, and precipitation.

## Recent Weather Conditions Chart

Complete this  
section by  
forecasting.

	Tuesday	Wednesday	Thursday	Friday
Temperature	34 degrees F	38 degrees F	36 degrees F	
Relative Humidity	98%	92%	94%	
Barometric Pressure	29.98	29.5	29.63	
Sky Cover	Stratus	Stratus	Stratus	
Wind Direction	N	NE	NE	
Wind Speed	10 mph	6 mph	3 mph	
Precipitation	Rain	Drizzle	Light Mist	

Make your forecast for Friday's weather by completing the chart.

[illegible]

Did you complete the chart with Friday's forecast? If so, use this information to write an explanation that tells what you decided to wear on the field trip and give the reasons, relating to weather, for your choice. Be sure to include the following weather conditions in your explanation: temperature, relative humidity, barometric pressure, sky cover, wind direction, wind speed, and precipitation.



# Scoring Guide: Weather Forecasting

## 4: Outstanding

The student has made a reasonable clothing selection based on the weather forecast. The predictions for the weather conditions are reasonable and are based on recent conditions. The chart is complete and accurate.

## 3: Proficient

The student has made a reasonable clothing selection based on the weather forecast. The predictions for the weather conditions are, for the most part, reasonable with only one or two exceptions and, for the most part, are based on recent conditions. The chart is complete and, for the most part, accurate.

## 2: Emergent

The student has made a clothing selection that may be somewhat reasonable. The choice of clothing may or may not be based on the weather forecast. The predictions for the weather conditions show partial understanding. The chart is incomplete and/ or inaccurate.

## 1: Attempted

The student may have an appropriate clothing selection but it is apparent that there is little understanding of the knowledge and skills needed to do the task. The response shows severe misconceptions.

## 0: Other, Off Task, No Attempt